

MULTIMEDIA



UNIVERSITY

STUDENT ID NO

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MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2015 / 2016 SESSION

DOM5018 – OPERATIONS MANAGEMENT

(Diploma Students Only)

13 OCTOBER 2015

9.00 a.m – 11.00 a.m

(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of **NINE (9)** pages only excluding the cover page.
2. Answer **ALL** questions for section A, B and C.

Section A: 20 Multiple Choices Questions (20 marks)

Section B: 20 True/False Questions (20 marks)

Section C: 4 Short Structured Questions (60 marks)

3. Answers for section A and B should be shaded on the OMR sheet provided.
4. For section C, please write your answers in the answer booklet provided.

SECTION A: MULTIPLE CHOICE QUESTIONS (each question carries 1 mark).
Answers for this section should be shaded on the OMR sheet.

1. Which of the following will **NOT** be an operations function in Air Asia Sdn. Bhd?
 - A. Flying schedules
 - B. Crews duty schedules
 - C. Air craft maintenances
 - D. Airport construction
2. Which of the following is **NOT** in service sector?
 - A. Ng Dental Clinic
 - B. Public Bank Berhad
 - C. Creative Hair Studio and Academy
 - D. Samsung Malaysia Sdn. Bhd.
3. _____ statements tell the purpose for an organisation's existence.
 - A. Production
 - B. Mission
 - C. Strategy
 - D. Vision
4. When an organisation transferred its activities that traditionally been internal to an external supplier, this is referring to _____.
 - A. outsourcing
 - B. cost strategy
 - C. SWOT analysis
 - D. differentiation strategy
5. Ikea is competing based on _____ strategy among its competitors.
 - A. cost leadership
 - B. differentiation
 - C. response
 - D. global
6. R&D engineering is critical during _____ stage of a product life cycle.
 - A. introduction
 - B. growth
 - C. maturity
 - D. decline
7. Forecasting is a process of _____ a future event.
 - A. organising
 - B. predicting
 - C. stimulating
 - D. manufacturing

Continued.....

8. Dell would like to design a new model of laptop that consume solar power, _____ would be most appropriate for this new product planning.
- A. short range forecast
 - B. medium range forecast
 - C. long range forecast
 - D. manufacturing forecast
9. In the _____ stage of the product life cycle, operations managers will be concerned with adding capacity or enhancing existing capacity to accommodate the increase in product demand.
- A. introduction
 - B. growth
 - C. maturity
 - D. decline
10. _____ enables the grouping of parts into families based on similar processing requirements.
- A. Engineering drawings
 - B. Group technology
 - C. House of quality
 - D. Virtual technology
11. In Samsung production floor, there is a wall poster that shows the exploited view of each model of smart phone, a sketch of details on how to assemble the product, this is an example of _____.
- A. assembly drawing
 - B. assembly chart
 - C. route sheet
 - D. change order
12. Which of the following of service design techniques that would NOT be appropriate for a restaurant?
- A. Reduce customer interactions
 - B. Modularisation the product
 - C. Customisation
 - D. Impose extra charges on automation process
13. Shafiq is the production manager of BMX Bicycle Manufacturing, he has noticed that about 75 percent of defects result from raw materials, 10 percent result from human error, 10 percent from machine malfunctions, and 5 percent from a variety of other causes. Shafiq is most likely using a _____.
- A. cause-and-effect diagram
 - B. scatter diagram
 - C. Pareto chart
 - D. flowchart

Continued.....

14. Which of the following is **NOT** one of the major categories of costs associated with quality?
- A. External costs
 - B. Prevention costs
 - C. Appraisal costs
 - D. Hiring costs
15. Quality can improve profitability by reducing costs. Which of the following is **NOT** an aspect of reduced costs by quality improvements?
- A. Improve in productivity
 - B. Reduction in warranty costs
 - C. Reduction of scrap costs
 - D. Reduction of price
16. Which of the following is **NOT** one of the advantages of cycle counting?
- A. Eliminate shut downs and interruptions
 - B. Trained personnel audit inventory accuracy
 - C. Eliminate personnel taking leaves during cycle counting period
 - D. Maintains accurate inventory records
17. Which of the following is **NOT** a type of inventory?
- A. Finished goods
 - B. Raw material
 - C. Displayed items
 - D. Work in progress
18. There are two types of inventory models, namely _____ demand and _____ demand.
- A. individual; group
 - B. independent; dependent
 - C. quantity; quality
 - D. finished goods; work in progress
19. Which of the following is **NOT** a goal of Just In Time (JIT) partnership?
- A. Removal of conflicts among employees.
 - B. Removal of in plant inventory.
 - C. Improved quality and reliability.
 - D. Removal of unnecessary activities.
20. Which of the following is **NOT** in 5Ss?
- A. Sort
 - B. Sustain
 - C. Shine
 - D. Supplement

[TOTAL 20 MARKS]

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SECTION B: TRUE/FALSE QUESTIONS (each question consists of 1 mark).**Answers for this section should be shaded on the OMR sheet.****Mark "A" for the TRUE statement and "B" for the FALSE statement.**

21. Productivity is more difficult to improve in the manufacturing sector.
22. One of the reasons that we need to study OM is because OM is costly to an organisation.
23. "How much inventory of this item should we have?" is within the critical decision area of managing quality.
24. Analog TVs are at maturity stage of its product life cycle in today's market.
25. Multidomestic strategy moves material, people and ideas across national boundaries.
26. Strategies exploit opportunities and strengths, neutralise threats, and avoid weaknesses.
27. In realities, forecasts are seldom perfect due to unpredictable factors.
28. Kaizen is a German terms that means continuous improvement.
29. Six sigma program was originally developed by Motorola.
30. Histogram is one of the TQM tools to identify problems.
31. Benchmarking requires the comparison of an organisation to other organisations; it is not appropriate to benchmark within departments of an organisation.
32. A Six Sigma program has 1,000 defects per million.
33. "Making it right the first time" is the user-based definition of quality.
34. In ABC analysis, "C" Items are the most tightly controlled.
35. The objective of inventory management is to strike a balance between inventory investment and customer service
36. One of the functions of inventory is to take advantage of quantity discounts.
37. Inventory is importance because it is one of the most expensive assets of many companies.

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38. Lean operations eliminate waste through continuous improvement and focus on exactly what the supplier wants.
39. Lean operations are not applicable to service sectors.
40. JIT is an approach of continuous and forced problem solving via a focus on customers' demand.

[TOTAL 20 MARKS]

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SECTION C: STRUCTURED QUESTIONS (60 Marks)

Answer ALL questions. Answers should be written on the answer booklet provided.

QUESTION 1

Operations management (OM) is a discipline that applies to service firms such as bank and restaurant as well as manufacturing factories like Proton and Dell.

- a) Define operations management. (2 marks)
- b) There are 10 strategic OM decisions generally made by operations managers in the OM function. List down all of these decisions. (5 marks)
- c) Explain the difference between production and productivity. (3 marks)
- d) Nadia Manufacturing Sdn Bhd produces 1,000 bicycle per day with the following resources in **Exhibit 1**:

Labour:	400 hours per day @ RM12.50 per hour
Raw Material:	20,000 pcs per day @ RM1 per pc
Energy:	RM5,000 per day
Capital costs:	RM10,000 per day

Exhibit 1

- i. Compute the labor productivity. (2 marks)
- ii. Compute the multifactor productivity. (3 marks)
- iii. Compute the percent change in multifactor productivity if the energy cost reduces by RM2,000 per day without any other change in other inputs. (5 marks)

****Note: state your answer in THREE (3) decimal points for question ii and iii.***

[TOTAL 20 MARKS]

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QUESTION 2

Exhibit 2 shows the sales of water bottles at MM Tupperware Store over the past 4 months.

Month	Sales (RM)
July	360
August	389
September	410
October	298

Exhibit 2

Based on **Exhibit 2**,

- a) Compute a 3-month moving average forecast for November. (2 marks)
- b) Compute a 4-month moving average forecast for November. (2 marks)
- c) Compute a 4-month moving average forecast for December if the actual sales in November turn out to be 322. (2 marks)
- d) Compute a weighted moving average forecast for November using a weight of 4 for the most recent month, 3 for the next most recent, 2 for the next and 1 for the next. (4 marks)

***Note: state your answer in TWO (2) decimal points for above questions.**

[TOTAL 10 MARKS]

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QUESTION 3

- a) Define waste. (2 marks)
- b) Define manufacturing cycle time. (2 marks)
- c) Differentiate between a *push system* and a *pull system*. (3 marks)
- d) List **three (3)** core components the Toyota Production System (TPS) emphasised on. (3 marks)
- e) Miing Electronics Sdn. Bhd. produces car batteries. You have been asked to reduce inventory by introducing a kanban system. After several hours of analysis you have developed the following data, how many kanbans do you need for this battery?
- Daily demand: 1,500 units
 - Production lead-time: 1 day
 - Safety stock: 1 day
 - Kanban size: 250 units

(5 marks)

[TOTAL 15 MARKS]**Continued.....**

QUESTION 4

- a) Does logistics management important in supply chain management? Justify your answer. (3 marks)
- b) List **six (6)** types of shipping systems that commonly being used in logistics management. (6 marks)
- c) Identify **six (6)** sourcing strategies. (6 marks)

[TOTAL 15 MARKS]

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